



Energy Savings in Networks-on-Chip with Smart Temporal Shielding

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Résumé en anglais	<p>Networks-on-Chip (NoCs) are recognized to be the solution to address the communication bottleneck in many-core systems. As the NoC represents a significant part of the system power consumption, NoC energy consumption optimization is a challenging task. In this paper, we propose a shielding technique enhanced for NoCs and we evaluate its efficiency by comparing it to the best achievable energy saving. Then, we propose a shielding generator and its architecture to balance performances and energy saving. Results are carried out on a NoC simulator under synthetic traffics and application based traffics. These results show up to 13% of total energy saving and the impact on performances can be reduced by 33% compared to already existing shielding techniques.</p>
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